

The 2002 FIRST Robotics Competition
TEAM UPDATE #7

Date: February 15, 2002

RULE UPDATES

The following text is added after the first sentence of Rule T11: “Therefore, the team that did not compete in the first match of a series should compete in the second match of the series.”

In Rule DQ7, the last word should read “disqualified”, not “disabled”.

INSPECTION CHECKLIST

Please look at the revised inspection checklist on the following page before shipment of your robot on Tuesday.

2002 FIRST ROBOTICS COMPETITION INSPECTION CHECK LIST

Team #			PASS	
Weight		Heaviest configuration with battery, bumpers, and decorations (≤ 130.0)	Initials	
Size		Must fit freely in ready-to-run condition with no bumpers (30"x36"x60")	DATE	
C.C Cost		Custom circuit board (U.S. \$)	TIME	

MECHANICAL

	Team name and/or logo and number on 2 sides - 5" numerals 180 deg. apart.
	Bumpers must be removable and meet size (extend max. 4" horizontally on all sides and be located in the region 2" to 8" from the floor) and material constraints (no hard materials; if you can punch it and not hurt your hand, it's ok).
	Decorations must be non-functional (cannot affect outcome of match).
	Changeable rotating light (Red & Blue) easily accessible, visible from 4 sides of robot and mounted upright.
	Wheels do not damage carpet. (No Velcro on wheels.)
	Meets Additional Hardware list requirements.
	No sharp objects that could harm people, damage balls or playing field.
	Maximum of 5' latex tubing allowed to launch balls.
	Springs only from Kit or SPI. Latex tubing use acceptable.
	No excess lubricants that could contaminate field or balls.
	The Robot Controller LED's are visible.
	No tape used as a fastener. Only acceptable as an electrical insulator or decoration.
	No illegal modification of control system components.
	No loose wires or material to cause entanglement.
	Battery is secured and easily removable.

ELECTRICAL

	Only 1 battery on robot.
	Battery terminals must be insulated (electrical tape acceptable).
	60A circuit breaker in series with battery (RED lead).
	20 or 30A circuit breaker in series with each speed controller.
	20A circuit breaker (on all remaining components) or fuses of equal or smaller value.
	All Fisher-Price, drill, Mabuchi, Chiaphua, and Globe motors on one Innovation First speed controller each.
	No more than one motor and 2 valves per relay module.
	No more than one motor per speed controller.
	Motor, pump or valve cannot be wired directly to junction block.
	Custom circuit must be totally contained in BUD box.
	Sensors wired to Robot Controller sensor port or custom circuit board only (no series connections with motors, etc. except a current-measuring input on custom circuit).
	Proper wire color for constant polarity power distribution (red/white for positive, black for negative).
	#6 wire from battery to junction block or fuse panel (battery -> battery fuse -> junction block or fuse panel).
	#10 wire to speed controllers, Chiaphua motors, drill motors, Mabuchi Motor, and Fisher-Price motors.
	#16 wire to Robot Controller logic power, valves, window motors, Globe motors, seat motors, Johnson motor, relays, large muffin fan, and rotating light.
	#24 wire to switches, PWM cables, sensors, potentiometers, small muffin fans, and LED's.
	No exposed electrical conductors.
	No wires in electrical contact with robot metal chassis.
	Proper use of electrical connectors and electrical tape.
	No fabricated terminal strips (off the shelf terminal strips allowed per Additional Hardware list).
	Team # set correctly on Robot Controller (power up RC via tether connection to check).
	Rotating light must be on a relay that comes on/off when control system is enabled/disabled (power up RC to check).
	Rotating light must be insulated from chassis and mounted on non-conductive surface.

PNEUMATICS

	All pneumatics parts are from the Kit / or from approved custom orders.
	No modified pneumatics components.
	No custom pneumatics components.
	All air from compressor goes through regulator before any valves, cylinders, etc.
	Pressure switch cannot be wired in series with the pump.
	Regulator set to maximum of 60 psi.